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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,216	10/16/2000	KNUD ERIK BAEKGAARD	740119-98	8804

22204 7590 01/29/2003

NIXON PEABODY, LLP  
8180 GREENSBORO DRIVE  
SUITE 800  
MCLEAN, VA 22102

EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/688,216	BAEKGAARD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Laura A Grier	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6,11,12,21 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-5,7,8,10 and 13-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other:  |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 6, 9, 11-12, 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Harley in view of Dieken et al, U. S. Patent No. 5347583.

Regarding **claim 1**, Harley discloses an active noise control stethoscope (figures 1-4). Harley's disclosure comprises a sensor means, which inherently teaches a vibration transducer as evident by the fact that sensor detects body sounds (vibrations, etc.) and converts the sound into electrical signals (col. 10, lines 55-60); a headset (13), which constitutes as headphones; a FIR filter for providing amplification (col. 10, lines 10-12); and a digital filter (col. 7, lines 5-27), wherein the electric stethoscope provides an acoustic output; and as well a noise control stethoscope constitutes as a type of acoustic stethoscope. However, Harley fails to specifically disclose a pre-emphasis filter for emphasizing high frequencies. The examiner maintains that such a filter was well known in the art.

Regarding the filter, in a similar field of endeavor, Dieken et al. (herein, Dieken) discloses an electronic stethoscope having binaural earpiece. Dieken's disclosure teaches an electronic stethoscope providing an acoustic output like that of a conventional stethoscope, and as well, Dieken discloses a filter for high frequencies

characteristics (col. 7, lines 4-20), which may constitute as a pre-emphasis filter for emphasizing high frequencies.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Harley for the purpose of providing high frequency conditioning of the sounds picked up or sensed from a person's body.

Regarding **claim 6**, Harley and Dieken discloses everything claimed as applied above (see claim 1). Harley further discloses impulse transfer functions of a digital filter is obtained by measurement of an active noise control stethoscope (a digital filter (col. 7, lines 5-27), wherein the electric stethoscope provides an acoustic output; and as well a noise control stethoscope constitutes as a type of acoustic stethoscope).

Regarding **claim 9**, Harley and Dieken discloses everything claimed as applied above (see claim 1). Harley further discloses support providing automatic amplification control (col. 10, lines 25-30).

Regarding **claim 11**, Harley and Dieken discloses everything claimed as applied above (see claim 1). Harley further discloses the headphone arrangement with transducer fitted in an immediate proximity of the ear canal of each ear (figure 1 and col. 5, lines 46-51).

Regarding **claim 12**, Harley and Dieken discloses everything claimed as applied above (see claim 1). Harley further discloses means of providing adequate compensation (col. 9, lines 63-67 and col. 10, lines 25-46).

Regarding **claim 21**, Harley and Dieken discloses everything claimed as applied above (see claim 1). Harley further provides inherent support that the transfer function

of the stethoscope produces temporal relations as those produced by a acoustic stethoscope as evident by stethoscope's ability to function in respect to a user's hearing capabilities (col. 10, lines 10-32).

Regarding **claim 22**, Harley and Dieken discloses everything claimed as applied above (see claim 1). Harley further provides inherent support that the digital has filter coefficients equal to the resonance peaks of a transfer function for an acoustic stethoscope (col. 7, lines 5—67) and evident by the fact the stethoscope based on the filters' functions provide this electronic stethoscope with the output of an conventional acoustic stethoscope.

***Allowable Subject Matter***

3. Claims 2—5, 7-8, 10, 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

In the response/remark filed on 10/25/02, pages 2-3, the applicant argued that the primary reference of Thomasson did not teach the invention in respect to the filter for emphasizing high frequencies and for providing an electric stethoscope that function in response to impulse transfer functions of a digital filter that makes the electric

stethoscope functions as an acoustic stethoscope. The examiner agrees with the arguments of Thomasson. In reference to Harley, the applicant argues that the reference of Harley fails to provide the teachings of an electronic stethoscope that functions of at least one acoustic type stethoscope. In support of Harley, the examiner has maintained the prior art reference of Harley, in conjunction with another reference of prior in the same environment. Harley is now the primary reference prior art in respect that Harley discloses the essential concepts of the claim language of the invention. Harley discloses a digital filter that generates impulse transfer functions corresponding to an active noise control stethoscope, wherein a noise control stethoscope constitutes as at least one type of acoustic stethoscope. Harley specifically states throughout its specification that the stethoscope functions as a conventional stethoscope.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

### **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

### **Or faxed to:**

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Art Unit: 2644

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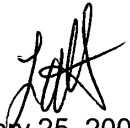
**(703) 872-9314 (for Technology Center 2600 only)**

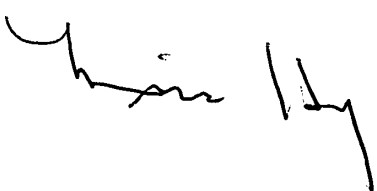
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-

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4700.

LAG   
January 25, 2003

  
**MINSUN OH HARVEY  
PRIMARY EXAMINER**



**UNITED STATES DEPARTMENT OF COMMERCE  
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